



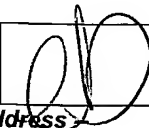
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,888	07/17/2003	Keith A. Young	66638-40275	2738
21888	7590	10/04/2004		
THOMPSON COBURN, LLP ONE US BANK PLAZA SUITE 3500 ST LOUIS, MO 63101			EXAMINER JOHNSON, JONATHAN J	
			ART UNIT	PAPER NUMBER
			1725	

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/622,888	Applicant(s) YOUNG ET AL.	
	Examiner Jonathan Johnson	Art Unit 1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2-9-04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8-11 and 13-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Tatsuo et al. (JP 2002-283069). Tatsuo et al. teach assembling a first member to a second member, the first member comprising a thin sheet portion of material having opposite first and second faces and also comprising opposing restraining surfaces that are oriented at an angle relative to the first face of the sheet portion (fig. 1, side surface of S), the second member comprising a rib that has a terminal edge margin (Figure 1, item 6), the assembling comprising engaging the edge margin of the rib of the second member with the first member in manner such that the rib of the second member extends at an angle away from the first face of the first member and such that the edge margin is positioned between the restraining surfaces of the first member (fig. 1, items 5 and 6); and stir welding the first member to the second member by engaging a stir welding tool against the second face of the first member (fig. 1, item 5a), the stir welding occurring with the first and second members being assembled to each other in accordance with the preceding step of assembling the first member to the second member (fig. 1, items 5 and 6), the restraining surfaces of the first member limiting movement of the edge margin of the second member relative to the first member during the stir welding (fig. 1, item S);

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wherein the first and second members are each formed as a single monolithic piece of contiguous material and wherein one of the first and second members comprises a tooling portion (fig. 1, item 3) forming a portion of the monolithic piece thereof, the method further comprising securing the first and second members to a stir welding apparatus via the tooling portion during the step of stir welding the first member to the second member, and separating the tooling portion from the first and second members after stir welding the first member to the second member (fig. 3, item 5 and 6); wherein the tooling portion forms a portion of the monolithic piece of the second member and forms a loop around the rib of the second member prior to being separated from the first and second members (fig. 3, item 12, where the shape of the weld forms the loop around the rib); wherein the tooling portion constitutes a first tooling portion forming a portion of the monolithic piece of the one of the first and second members, and wherein the other of the first and second members comprises a second tooling portion forming a portion of the monolithic piece thereof, the method further comprising securing the first and second members to each other via the first and second tooling portions during the step of stir welding the first member to the second member, and separating the second tooling portion from the first and second members after stir welding the first member to the second member (fig. 1, item 4, where the friction-stir treatment causes both the probe (3) and shoulder (4) to form a portion of the monolithic piece) wherein the restraining surfaces of the first member extend parallel to each other and form a groove therebetween (fig. 1, item 5), and wherein the step of assembling further comprises inserting the edge margin of the rib of the second member into the groove of the first member (fig. 1, item 6); wherein the first member further comprises a pair of locking surfaces that oppose the first face of the sheet portion of the first member, the restraining surfaces of first

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member being positioned between the locking surfaces and the first face (fig. 1, items 5 and 6), and wherein the rib has opposite first and second faces and the edge margin of the rib comprises a pair of locking surfaces, the first and second faces of the rib being positioned between the locking surfaces of the rib, and yet further wherein the step of assembling further comprises engaging the locking surfaces of the first member with the locking surfaces of the second member in a manner limiting the movement of the rib away from the first face of the first member (fig. 1, items 5 and 6 where the groove limits the movement horizontal moment, which limits the potential for the rib to move away from the first face of the first member in the x-direction).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tatsuo et al. (JP 2002-283069) as applied to claim 6 above and further in view of Lockshaw et al. (5,580,622). Lockshaw et al. teach resiliently deflecting the locking surfaces of the first member away from each other as the edge margin of the rib of the second member is inserted into the groove of the first member, and allowing the locking surfaces of the first member to resiliently move toward each other in a manner such that the locking surfaces of the rib of the second member are positioned between the locking surfaces of the first member and the sheet portion of the first

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member (figure 6, item 28). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the welding joint of Tatsuo et al. to utilize the bead in order to ensure the interfitting of the parts (see Tatsuo et al. col. 5, l. 50 to col. 6, l. 5).

Claims 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tatsuo et al. (JP 2002-283069) as applied to claim 11 above and further in view of Lockshaw et al. (5,580,622). Lockshaw et al. teach resiliently deflecting the locking surfaces of the first member away from each other as the edge margin of the rib of the second member is inserted into the groove of the first member, and allowing the locking surfaces of the first member to resiliently move toward each other in a manner such that the locking surfaces of the rib of the second member are positioned between the locking surfaces of the first member and the sheet portion of the first member (figure 6, item 28). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the welding joint of Tatsuo et al. to utilize the bead in order to ensure the interfitting of the parts (see Tatsuo et al. col. 5, l. 50 to col. 6, l. 5).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Johnson whose telephone number is 571-272-1177.

The examiner can normally be reached on M-Th 7:30 AM-5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jonathan Johnson
Examiner
Art Unit 1725

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